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What is claimed is:

1. (Amended) A method for forming an insulating film, the method, comprising the steps of:

forming a base insulating film on a substrate; and

forming a high-k dielectric film on the base insulating film,

wherein the high-k dielectric film forming step includes:

a first step of depositing, in the processing vessel, the high-k dielectric film under a first condition so as to allow a residence time of the metal organic compound to extend to a first value; and

a second step for further depositing the high-k dielectric film under a second condition so as to allow the residence time of the metal organic compound to extend to a second value smaller than the first value.

2. (Amended) The method for forming an insulating film of claim 1, wherein, in the first step, the processing pressure in the processing vessel is set at a first processing pressure, and, in the second step, the processing pressure in the processing vessel is set at a second processing pressure which is lower than the first processing pressure.

3. (Amended) The method for forming an insulating film of

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claim 1, wherein, in the first step, the flow rate of a carrier gas or oxygen gas supplied into the processing vessel is set at a first flow rate, and, in the second step, the flow rate of the carrier gas or the oxygen gas is set at a second flow rate which is greater than the first flow rate.

4. (Amended) The method for forming an insulating film of claim 1, wherein the high-k dielectric film is a crystalline film, and in the first step, crystalline nuclei of the high-k dielectric film are formed on the substrate.

5. (Amended) The method for forming an insulating film of claim 1, wherein the metal organic compound is an organic compound containing Hf or Zr, and the high-k dielectric film is a HfO_2 film or a ZrO_2 film.

6. (Amended) The method for forming an insulating film of claim 1, wherein the metal organic compound is tetra(tert-butoxy)hafnium, and the residence time is set to exceed 0.25 second in the first step and to be less than 0.25 second in the second step.

7. (Amended) The method for forming an insulating film of claim 6, wherein, in the first step, the processing pressure in the processing vessel is set to exceed 133 Pa, and in the second step, the processing pressure in the processing

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vessel is set at 133 Pa or below.

8. (Amended) The method for forming an insulating film of claim 6, wherein, in the first step, the processing pressure in the processing vessel is set at 200 - 400 Pa, and in the second step, the processing pressure in the processing vessel is set at about 40 Pa or below.

9. (Amended) The method for forming an insulating film of claim 6, wherein the first and the second steps of the high-k dielectric film forming step are performed at a temperature of 450 °C or higher.

10. (Amended) The method for forming an insulating film of claim 6, wherein the first and the second steps of the high-k dielectric film forming step are performed at a temperature of about 550 °C.